



**Billing Code 4333–15–P**

**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

**[Docket No. FWS–R2–ES–2016–0137; FXES11130900000 189 FF09E42000]**

**RIN 1018–BB89**

**Endangered and Threatened Wildlife and Plants; Reclassifying *Echinocereus fendleri* var. *kuenzleri* from Endangered to Threatened**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), reclassify *Echinocereus fendleri* var. *kuenzleri* (Kuenzler hedgehog cactus) from endangered to threatened on the Federal List of Endangered and Threatened Plants under the authority of the Endangered Species Act of 1973, as amended (Act). This determination is based on a thorough review of the best available scientific and commercial information, which indicates that the threats to this plant have been reduced to the point that it no longer meets the definition of endangered under the Act, but that it is likely to become an endangered species within the foreseeable future.

**DATES:** This rule is effective [INSERT DATE 30 DAYS AFTER DATE OF FEDERAL REGISTER PUBLICATION].

**ADDRESSES:** This final rule, as well as comments and materials received in response to the proposed rule, are available on the Internet at <http://www.regulations.gov> at Docket No. FWS–R2–ES–2016–0137. Comments and materials we received, as well as supporting documentation used in preparation of this rule, are available for public inspection at <http://www.regulations.gov>

and by appointment, during normal business hours, at U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

**FOR FURTHER INFORMATION CONTACT:** Susan S. Millsap, Field Supervisor, U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, 2105 Osuna NE, Albuquerque, NM 87113; telephone 505–346–2525; email *nmesfo@fws.gov*. If you use a telecommunications device for the deaf (TDD), call the Federal Relay Service at 800–877–8339.

## **SUPPLEMENTARY INFORMATION:**

### **Background**

At section 3(16), the Endangered Species Act of 1973, as amended (Act; 16 U.S.C. 1531 et seq.), defines the term “species” as including any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature. As such, we may refer to the variety *Echinocereus fendleri* var. *kuenzleri* as a “species” in this rule.

Under the Act, a species is an endangered or threatened species based on any one or a combination of the five listing factors established under section 4(a)(1) of the Act: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence.

After conducting a review of its biological status and threats, we have determined that *Echinocereus fendleri* var. *kuenzleri* is no longer in danger of extinction throughout all or a significant portion of its range; however, this plant is likely to become endangered within the

foreseeable future as a result of wildfire, livestock grazing, effects of climate change (Factor A), illicit collection (Factor B), and small population size and density (Factor E).

We sought comments from independent specialists to ensure that our determination is based on scientifically sound data, assumptions, and analyses. We invited these peer reviewers to comment on our reclassification proposal, and we considered all comments and information we received during the public comment period.

This rule makes final the reclassification of *E. f. var. kuenzleri* from an endangered to a threatened species.

### **Previous Federal Actions**

We proposed to list this plant, with the scientific name *Echinocereus hempeii*, as an endangered species under the Act on June 16, 1976 (41 FR 24524), because of threats from the demand by private and commercial collectors, road maintenance and improvements, cattle grazing, and real estate development. On October 26, 1979 (44 FR 61924), we published in the *Federal Register* a final rule listing the plant, with the scientific name *Echinocereus kuenzleri*, as an endangered species. Benson (1982, p. 631) subsequently reduced this species to infraspecific rank as *E. fendleri* var. *kuenzleri*. Based on this nomenclatural change, we accepted the variety *E. fendleri* var. *kuenzleri* and officially changed the name on the List of Endangered and Threatened Wildlife and Plants in 1984 (Service 1984, p. 21). We finalized a recovery plan for this species in March 1985 (Service 1985, entire).

On July 21, 2004, we published a notice (69 FR 43621) announcing that we were conducting a 5-year review of the status of *E. f. var. kuenzleri* under section 4(c)(2) of the Act. The 5-year review was completed on June 7, 2005 (Service 2005, entire), and recommended a reclassification of the species from endangered to threatened.

We received a petition dated July 11, 2012, from The Pacific Legal Foundation, Jim Chilton, the New Mexico Cattle Growers' Association, New Mexico Farm and Livestock Bureau, New Mexico Federal Lands Council, and Texas Farm Bureau requesting the Service to reclassify *E. f. var. kuenzleri* from endangered to threatened. The petition was based on the analysis and recommendations contained in the 2005 5-year review.

On September 9, 2013 (78 FR 55046), we published in the *Federal Register* a 90-day finding for the 2012 petition to reclassify *E. f. var. kuenzleri*. In our 90-day finding, we determined the 2012 petition provided substantial information indicating the petitioned action may be warranted, and we initiated a status review for the plant.

On November 20, 2015, the Service received a complaint (*New Mexico Cattle Growers' Association et al. v. United States Department of the Interior et al.*, No. 1:15-cv-01065-PJK-LF (D. N.M.)) for declaratory judgment and injunctive relief from the New Mexico Cattle Growers' Association, Jim Chilton, New Mexico Farm and Livestock Bureau, New Mexico Federal Lands Council, and Texas Farm Bureau to compel the Service to make a 12-month finding on the 2012 petition. We completed an updated 5-year review in 2016 (Service 2016, entire). The 2016 5-year review also recommended a reclassification of the species from endangered to threatened.

On January 6, 2017 (82 FR 1677), we published a proposed rule to reclassify *E. f. var. kuenzleri* as threatened, which also constituted our 12-month petition finding that the action requested in the 2012 petition is warranted.

On June 13, 2017 (82 FR 27033), we reopened the comment period on the proposed reclassification of *E. f. var. kuenzleri* for 30 days in order to publish a legal notice and to give all interested parties further opportunity to comment on the proposed rule. On June 14, 2017, we published legal notices in Carlsbad and Roswell, New Mexico, newspapers.

## Summary of Biological Status and Threats

It is our intent to discuss below only those topics directly relevant to the reclassification of *Echinocereus fendleri* var. *kuenzleri* from endangered to threatened. For a thorough assessment of the species' biology and natural history including limiting factors, species resource needs, and threats, please refer to the Species Status Assessment (SSA) Report (Service 2017, entire), which is available on the Internet at <http://www.regulations.gov> at Docket No. FWS–R2–ES–2016–0137.

In the SSA Report, we compile biological data and a description of past, present, and likely future threats (causes and effects) facing *E. f.* var. *kuenzleri*. Because data are limited, some uncertainties are associated with this assessment. Where we have substantial uncertainty, we have attempted to make our necessary assumptions explicit in the SSA Report. We base our assumptions in these areas on the best available scientific and commercial information. The SSA Report does not represent a decision by the Service on whether or not this taxon should be reclassified from an endangered species to a threatened species under the Act. The SSA Report does, however, provide the scientific basis that informs our regulatory decisions, which involve the further application of standards within the Act and its regulations and policies.

In 1979, at the time of listing, fewer than 200 individual plants had been documented at two locations. During inventories from 1976 to 2015, botanists found at least 4,330 *E. f.* var. *kuenzleri*. Most surveyors for *E. f.* var. *kuenzleri* state that the numbers of sightings likely under-represent the current numbers of cacti present because they are small and difficult to detect in the field when not blooming and because survey efforts are limited.

In conducting our SSA, we first considered what *E. f.* var. *kuenzleri* needs to ensure its viability. We generally define viability as the ability of the species to persist over the long term

and to avoid extinction. We next evaluated whether the identified needs of *E. f. var. kuenzleri* are currently available and the repercussions to the species when fulfillment of those needs is missing or diminished. We then considered the factors that are causing the species to lack what it needs, including historical, current, and future factors. Finally, considering the information reviewed, we evaluated the current status and future viability of the species in terms of resiliency, redundancy, and representation.

Resiliency is the ability of the species to withstand stochastic events (arising from random factors such as weather or fire) and, in the case of *E. f. var. kuenzleri*, is best measured by habitat connectivity. Redundancy is the ability of a species to withstand catastrophic events by spreading the risk and can be measured through the duplication and distribution of resilient populations across the range of *E. f. var. kuenzleri*. Representation is the ability of a species to adapt to changing environmental conditions and can be measured by the breadth of genetic diversity within and among populations and the ecological diversity of populations across the species' range. For *E. f. var. kuenzleri*, we evaluate representation based on the extent of the geographical range as an indicator of genetic and ecological diversity. The main areas of uncertainty in our analysis include the minimum amount of suitable habitat needed to support resilient populations and the number of populations needed to provide for adequate redundancy and representation.

We evaluated the species over a range of scenarios, from worsening conditions to continuing current conditions to better-than-expected conditions. Under continuing current conditions, the resiliency was determined to be moderate to high, but there was some risk of resiliency falling to a moderate to low level under worsening conditions (Service 2017, pp. 38, 41).

Redundancy has increased based on additional survey effort from the time of listing of 200 individuals at two locations to 11,000–22,000 individuals at 11 locations currently. These populations are spread over 190 kilometers (118 miles) of suitable habitat (Service 2017, p. 10). Based on this additional information, we conclude that there is sufficient redundancy to maintain the species during the timeframe of the SSA’s projections.

While we do not know the range of genetic diversity in the species, it occurs over a range of ecological conditions that suggest adequate representation to maintain genetic viability. The number of individuals and populations are consistent with guidelines to conserve genetic diversity (Whitlock et al. 2016, p. 134).

Our overall assessment concluded that *E. f. var. kuenzleri* has an overall moderate viability (probability of persistence) in the near term (between now and the next 50 years). In this summary, we present an overview of the comprehensive biological status review. A detailed discussion of the information supporting this overview can be found in the SSA Report (Service 2017, entire).

#### *Summary of Species Requirements*

*E. f. var. kuenzleri* is a small cactus that is endemic to the northwest side of the Sacramento and Capitan Mountains in Lincoln County, New Mexico, to the middle of the Guadalupe Mountains in Eddy County, New Mexico. *E. f. var. kuenzleri* reaches maturity in around 4 to 5 years of age, flowers in April to June, lives for roughly 30 to 40 years, with an estimated 10 percent annual mortality. *E. f. var. kuenzleri* occurs in the lower fringes of the pinion-juniper woodland from about 1,560 to 2,130 meters (5,100 to 6,990 feet) elevation with an average of 180 frost-free days and annual precipitation of about 41 centimeters (16 inches).

Occupied habitat consists of gentle slopes (15 to 60 percent) or benches with gravelly to rocky soils and southern, eastern, and western exposures.

*E. f. var. kuenzleri* can be found in soil composed mostly of sand, silt, and a smaller amount of clay particles (loam), containing 35 percent or more (by volume) of rock fragments, cobbles, or gravel (skeletal). This combination of particles and small rock fragments allows for rapid soil drainage. The soil depth ranges from very shallow to very deep, derived from limestone, sandstone, sedimentary rock, igneous rock, or mixed sources (Soil Survey Geographic Database [SSURGO] 2014).

#### *Review of the Recovery Plan*

In 1985, we published a recovery plan for *E. f. var. kuenzleri* (Service 1985, entire). The first downlisting criterion in the recovery plan states that *E. f. var. kuenzleri* could be reclassified to threatened status when existing natural populations are increased to approximately 5,000 individual plants and when that population level is maintained for a period of 5 consecutive years (Service 1985, p. iii). The second downlisting criterion in the 1985 recovery plan is based on the need for the Service to remove the collecting pressure to offset the threat of illegal collection.

The first criterion was intended to address the point at which imminent threats to the plant had been reduced so that the populations were no longer in immediate risk of extirpation. Since its listing in 1979, estimated abundance of individuals in all populations has changed over time from approximately 200 individuals to a current known status of 11 populations with 4,330 plants observed (1976–2015) (Service 2005, p. 4; Service 2016, pp. 34). Because of the difficulty in locating nonflowering plants and limited survey efforts, we used a habitat suitability model in the SSA to estimate the population size (Service 2017, Appendix B). This model



resulted in an estimated total population of between 11,000–20,000 individuals occurring across the range of the species (Service 2017, p. 13).

The second recovery criterion is to remove the collecting pressure by promoting commercial propagation. Regardless of its commercial availability, we believe that local populations, especially near the type locality (location where the description and name of a new species is based), may continue to be impacted by occasional poaching from growers and hobbyists. This conclusion is based on recent observations of illegal collection (Baggao 2017, p. 1). Data that we have analyzed indicate that most threats identified in the recovery plan have been reduced or eliminated in areas occupied by *E. f. var. kuenzleri*. As discussed in the SSA Report, the status of the species has improved since the 1985 recovery plan, primarily based on finding additional populations over a broader range. However, the SSA Report also discusses additional threats to the species, primarily associated with fire regime alteration and climate change effects (i.e., lengthening of drought duration, increased temperatures, less precipitation, and increased evaporative deficit) (Service 2017, pp. 16–21), that are likely to impact the species.

#### **Summary of Factors Affecting *Echinocereus fendleri* var. *kuenzleri***

At the time of listing, the primary threats to *E. f. var. kuenzleri* were private and commercial collection, road improvement and maintenance, real estate development, and livestock grazing (44 FR 61924; October 26, 1979). In the 1985 recovery plan, we concluded these same threats continued to impact the species (Service 1985, pp. 8–12). Subsequently, in 2005 and 2016, we conducted 5-year status reviews (Service 2005, pp. 12–14; Service 2016, p. 5). The 2005 5-year status review found that the threat of habitat loss from road improvement and maintenance and real estate development (Factor A), and a direct threat from illegal

collection (Factor B), have been reduced or eliminated since the time of listing, and are no longer affecting the status of the species. Livestock grazing (Factor A) continued to be a threat by trampling in areas that are improperly managed. The 2005 5-year review also identified an additional threat of fire based on the alteration of the natural fire regime (Service 2005, p. 13). The 2016 5-year status review identified climate change effects (i.e., lengthening of drought duration, increased temperatures, less precipitation, and increased evaporative deficit) as additional threats to the species. *E. f. var. kuenzleri* requires 41 centimeters (16 inches) or more of rain annually to persist. Drought has impacted several populations and long-term trends indicate increased temperatures and a decrease in precipitation within the range of the cactus (Service 2016, pp. 10–11). The SSA Report identified wildfire (Service 2017, p. 17), livestock grazing (Service 2017, pp. 17–18), effects of climate change (Service 2017, pp. 20–21) (Factor A), illicit collection (Service 2017, p. 19) (Factor B), and small population size and density (Service 2017, p. 20) (Factor E) as continuing or additional threats to the species.

### **Summary of Comments on Proposed Rule**

In the proposed rule published on January 6, 2017 (82 FR 1677), we requested that all interested parties submit written comments by March 7, 2017. On June 13, 2017 (82 FR 27033), we reopened the comment period for 30 days in order to give all interested parties further opportunity to comment on the proposed rule. We received 16 comment letters on the proposed reclassification of *E. f. var. kuenzleri*. All substantive comments are either incorporated directly into this rule or the SSA Report, or are addressed below.

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited independent expert opinion on the SSA Report (Service 2017, entire) from five individuals with scientific and conservation expertise that included familiarity with *E. f. var.*

*kuenzleri* and its habitat, biological needs, and threats to the species. We received responses from four of the five peer reviewers. We reviewed all comments we received from the peer reviewers for substantive issues and new information regarding the status of *E. f. var. kuenzleri*. All substantive information provided during peer review is either incorporated directly into this rule or the SSA Report, or is addressed below.

#### *Peer Review Comments*

*Comment:* Several commenters raised concerns about the population estimate provided in the SSA Report. These comments questioned the population density values, the minimal ground truthing associated with the population estimate, and the level of uncertainty in the population estimation. According to the commenters, these factors led to an over-estimation of population numbers.

*Response:* We acknowledge that there is some uncertainty in the population estimate. However, this estimate was based on the best scientific and commercial data available. We consider the model-based population estimate to be reasonably conservative as described in the SSA Report. As part of continuing recovery efforts, we will work with Bureau of Land Management (BLM), U.S. Forest Service (USFS), and private landowners to further ground-truth the habitat model and refine the density and population estimates, as appropriate, and to incorporate changes into an updated recovery plan.

*Comment:* One commenter pointed out that fire regime data for *E. f. var. kuenzleri* habitat are lacking and not supportive of prescribed fire to manage fuel loads.

*Response:* We discuss the role of fire and assess its effects to the species in the SSA Report (Service 2017, p. 17) based on the best scientific and commercial data available. Overall, we believe additional prescribed fire would be beneficial to the species and reduce the risk of

catastrophic fires. The commenter did not provide additional fire regime information to incorporate into our analysis.

*Comment:* One commenter raised concerns about the inclusion of asynchronous flowering (flowers not blooming at the same time) as a threat.

*Response:* Inclusion of this threat in the SSA Report was based on preliminary anecdotal information that asynchronous flowering may be occurring in the species and this might affect reproductive success. We found no substantive data that this is a threat. Based on this comment and additional analysis by the Service, we revised the SSA Report to remove discussion of asynchronous flowering as a threat.

*Comment:* Several commenters raised concern about readers potentially using the modeled population estimate out of context or scope.

*Response:* In the SSA Report, we clearly describe the scope and intent of the information provided in the habitat model used to estimate a reasonably conservative population estimate, with a disclaimer against improper use of the model.

#### *Public Comments*

*Comment:* Multiple commenters raised concerns about insufficient information and data provided to justify the downlisting of *E. f. var. kuenzleri*. For example, some commenters suggested that population trend data do not support a downlisting decision. Several comments raised concerns about climate change and drought as a significant threat to the species. In addition, several commenters raised concerns about livestock grazing, fire, and invasive species as significant threats to the plant, and stated that there are insufficient data on threats, as well as threats not having been fully analyzed.

*Response:* Based on the 5-year reviews and the SSA Report, we found *E. f. var. kuenzleri* is more widespread and numerous than when listed and conclude that it no longer meets the Act's definition of endangered. At the same time, we conclude that, based on threats continuing to impact the species, the species is likely to become in danger of extinction in the foreseeable future and, therefore, it should be reclassified as threatened.

We acknowledge in the SSA Report that the population trend data are limited. For this reason, we reviewed all available scientific and commercial data to help determine if the species is at risk of extinction in the foreseeable future. Based on available survey, observation, and trend data, and current and projected threats, we determine that *E. f. var. kuenzleri* is more widespread and numerous than when listed. Additionally, in our proposed rule and SSA Report (Service 2017, entire), we analyzed the biological and habitat requirements, threats, and viability of *E. f. var. kuenzleri* and found the species to have sufficient resiliency, redundancy, and representation. We also analyzed the climate change models specific to the occupied area (Service 2017, p. 20). This analysis was included in our overall assessment of the species' risk of extinction.

*Comment:* One commenter stated that downlisting should exempt the species from the take prohibition; application of the take prohibition to all threatened species is contrary to the text and purpose of the Act.

*Response:* With respect to threatened plants, 50 CFR 17.71(a) provides that all of the provisions in 50 CFR 17.61 shall apply to threatened plants, with one exception discussed below. We have concluded that no modifications to these prohibitions are appropriate for this species because there is continued threat of collection.

These provisions make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale in interstate or foreign commerce, or to remove and reduce to possession any such plant species from areas under Federal jurisdiction. In addition, the Act prohibits malicious damage or destruction of any such species on any area under Federal jurisdiction, and the removal, cutting, digging up, or damaging or destroying of any such species on any other area in knowing violation of any State law or regulation, or in the course of any violation of a State criminal trespass law. However, there is the following exception for threatened plants: Seeds of cultivated specimens of species treated as threatened shall be exempt from all the provisions of 50 CFR 17.61, provided that a statement that the seeds are of “cultivated origin” accompanies the seeds or their container during the course of any activity otherwise subject to these regulations. Exceptions to these prohibitions are outlined in 50 CFR 17.72.

We may issue permits to carry out otherwise prohibited activities involving threatened plants under certain circumstances. Regulations governing permits are codified at 50 CFR 17.72. With regard to threatened plants, a permit issued under this section must be for one of the following: Scientific purposes, the enhancement of the propagation or survival of threatened species, economic hardship, botanical or horticultural exhibition, educational purposes, or other activities consistent with the purposes and policy of the Act.

*Comment:* One commenter stated that the plant may merit being delisted from the Federal List of Endangered and Threatened Plants entirely. Another comment suggested that delisting criteria must be developed.

*Response:* Our SSA Report analyzes the biological and habitat requirements, threats, and viability of *E. f. var. kuenzleri* (Service 2017, entire), and found that threats still exist to the species. As such, we concluded that the species is likely to be at risk of extinction in the foreseeable future. The Service anticipates establishing delisting criteria and recovery actions based on the best scientific and commercial data available and information in the SSA Report. Information in the SSA Report supports our decision to reclassify *E. f. var. kuenzleri* to a threatened species.

*Comment:* Several commenters raised concerns about the outdated recovery plan. Alternatively, others commenters stated that the downlisting criteria in the recovery plan have not been met.

*Response:* We acknowledge the 1985 Recovery Plan that was developed according to guidance at the time, which includes biological factors, conservation measures, and threats (Service 1985, entire), does not conform to all current standards and guidance for recovery planning, as was recognized in the 2016 5-year review of this species (Service 2016, p. 6). The Service intends to develop an updated recovery plan in fiscal year 2019 with delisting criteria and recovery actions based on the SSA Report and any new information that may become available from monitoring and research.

While meeting the recovery criteria is not required for reclassification, we considered the applicable criteria in this determination. The criteria for downlisting to “threatened” in the Recovery Plan are: (1) To secure and maintain a wild population level of 5,000 individual plants for a period of 5 consecutive years, and (2) to remove the collecting pressure by promoting commercial propagation (Service 1985, pp. iii, 21). In the 2016 5-year review, 11 populations

with 4,330 plants had been observed (1976–2015) (Service 2016, pp. 3–4). In the SSA Report, based on the best scientific and commercial data available, we estimate a current population estimate of 11,000–20,000 individuals (Service 2017, p. 13). We consider this a conservative estimate. Also, a large area of suitable habitat has been identified that has not been surveyed.

*Comment:* Several commenters recommended that it would be appropriate to designate critical habitat for this cactus.

*Response:* The Service analyzed designating critical habitat in the listing rule (44 FR 61924, October 26, 1979, see p. 61926). The listing rule found it was not prudent to determine critical habitat because publication of critical habitat maps would make this species more vulnerable to taking. The plant has been and continues to be threatened by illegal collection (44 FR 61924, October 26, 1979; Service 2017, p. 19). Publication of designated critical habitat has the potential to make the species more vulnerable to collection by highlighting occupied locations; therefore, it remains inappropriate to designate critical habitat.

*Comment:* One commenter stated that the taxonomic status of the species has not been definitively settled.

*Response:* Although there is scientific debate regarding the classification of *Echinocereus fendleri* Englemann variety *kuenzleri* (Integrated Taxonomic Information System, <http://www.itis.gov>, accessed December 1, 2017), we conclude that the most recent taxonomic examinations by Baker (2007, entire), and Felix et al. (2014, entire) constitute the best available taxonomic information, and maintain the species at its current taxonomic level. We are planning to conduct a genetic study to help resolve the taxonomy of this cactus (Service 2014, p. 44).



*Comment:* Another commenter indicated that prescribed fires have a high potential to negatively impact these cacti and their reproductive potential.

*Response:* The threat of fire was analyzed in the January 6, 2017, proposed rule (82 FR 1677) and the SSA Report. Wester and Britton (2007, p. 11) studied the effect of prescribed burns as a means of reducing wildfire risk, and found no evidence that the species was negatively affected by prescribed fire because of the lower burn intensity. The comment does not offer additional scientific information to alter the conclusions in the SSA Report related to prescribed fire as a threat to the species.

*Comment:* Several comments raised concerns about distribution, abundance, and viability of the species' population. For example, some commenters suggested that without comprehensive rangewide surveys, the full extent and abundance of the species cannot be determined. Several comments raised concerns about the absence of trend data. In addition, a commenter raised concerns about the viability of the known populations.

*Response:* We analyzed in our January 6, 2017, proposed rule (82 FR 1677) and SSA Report (Service 2017, entire) the biological and habitat requirements, threats, and viability of *E. f. var. kuenzleri* and found the species to have: A population size necessary to endure stochastic environmental variation; the number and geographic distribution of populations or sites necessary to endure catastrophic events; and the ecological diversity, both within and among populations, necessary to conserve long-term adaptive capability in its current populations. As required by the Act, we have based the SSA Report and this reclassification decision on the best available scientific and commercial data.

*Comment:* One commenter stated that inadequate regulatory mechanisms fail to direct adequate resources towards sufficient documentation of the species' status.

*Response:* The comment does not identify what additional regulatory mechanisms would potentially offset an identified threat to the species. As required by the Act, we have based the SSA Report and this reclassification decision on the best available scientific and commercial data. We plan on developing a monitoring plan with our partners (BLM and USFS) to obtain additional information to further inform the species' status and development of delisting criteria (Service 2017, p. 44).

*Comment:* One commenter indicated that there is a need to fill data gaps by developing monitoring and research studies.

*Response:* In our SSA Report (Service 2017, entire), we acknowledge the need for a quantitative monitoring program, sufficient demographic information to complete a population viability analysis, and genetic analysis. We anticipate working with land management agencies to develop a comprehensive habitat management plan, establish a monitoring plan, and conduct genetic research for this species (Service 2017, p. 44).

*Comment:* One commenter raised the concern that limited distribution, range, and population size makes the species vulnerable to stochastic events.

*Response:* We analyzed in our January 6, 2017, proposed rule (82 FR 1677) and SSA Report (Service 2017, entire) the biological and habitat requirements, threats, and viability of *E. f. var. kuenzleri* and found the species to have: A population size necessary to endure stochastic

environmental variation; the number and geographic distribution of populations or sites necessary to endure catastrophic events; and the ecological diversity, both within and among populations, necessary to conserve long-term adaptive capability in its current populations. As required by the Act, we have based the SSA Report and this reclassification decision on the best available scientific and commercial data.

### **Summary of Changes from the Proposed Rule**

We have made no meaningful changes from the January 6, 2017, proposed rule (82 FR 1677). We have made updates to the final SSA Report based on information contained in peer review and public comments.

### **Reclassification Analysis**

Under section 4 of the Act, we administer the Federal Lists of Endangered and Threatened Wildlife and Plants, which are set forth in title 50 of the Code of Federal Regulations at part 17 (50 CFR 17.11 and 17.12). We can determine, on the basis of the best scientific and commercial data available, whether a species may be listed, delisted, or reclassified as described in 50 CFR 424.11.

The determination of whether a species is endangered or threatened under the Act is based on if a species is in danger of extinction or likely to become so in the foreseeable future because of any one or a combination of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. As required by section 4(a)(1) of the Act, we conducted a review of the status of this plant and assessed the five factors to evaluate whether *E. f. var. kuenzleri* is endangered or

threatened throughout all or a significant portion of its range. We examined the best scientific and commercial information available regarding the past, present, and future threats to *E. f. var. kuenzleri*.

In considering factors that might constitute threats to a species, we must look beyond the exposure of the species to a factor to evaluate whether the species responds to the factor in a way that causes impacts to the species or is likely to cause impacts in the future. If a species responds negatively to such exposure, the factor may be a threat and, during the status review, our aim is to determine whether impacts are or will be of an intensity or magnitude to place the species at risk. The factor is a threat if it drives, or contributes to, the risk of extinction of the species such that the species warrants listing as an endangered or threatened species as those terms are defined by the Act. This does not necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely affected could suffice. In sum, the mere identification of factors that could affect a species negatively is not sufficient to compel a finding that reclassification is appropriate; we require evidence that these factors act on the species to the point that the species meets the definition of an endangered or threatened species.

Using the SSA framework, we have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the species and considered what *E. f. var. kuenzleri* needs to maintain viability. As a result of recent information, we know that there are 11 known populations of *E. f. var. kuenzleri* compared to only 2 that were known at the time of listing. Individual cacti are spread across a wide range of suitable habitat patches. Significant impacts at the time of listing such as overcollection or residential development that could have resulted in the extirpation of all or parts of populations have been reduced since

listing. The long-term impacts of wildfire, livestock grazing, effects of climate change (Factor A), illicit collection (Factor B), and small population size and density (Factor E) throughout the range of the species were assessed in our SSA Report. Data indicate an increase in temperature (6–8 percent), a decrease in precipitation (-2 percent) and a substantial increase in evapotranspiration deficit (18-29 percent) within the occupied range of *E. f. var. kuenzleri* over the next 50 years (Service 2018, entire). We anticipate that effects due to climate change (such as a decrease in precipitation and a substantial increase in evapotranspiration deficit), fire, and increased drought, and the compounding effects of these threats, including any associated threats such as increased herbivory and predation will impact all of the populations in the foreseeable future. The New Mexico threatened and endangered plant regulations also do not protect *E. f. var. kuenzleri* or its habitats on private lands, with the exception of plant collection not authorized by the landowner (Factor D). We chose 50 years as the foreseeable future to evaluate what is likely to occur within the range of the available climate change model forecasts.

## **Determination of Status**

### *Introduction*

Section 4 of the Act (16 U.S.C. 1533), and its implementing regulations at 50 CFR part 424, set forth the procedures for determining whether a species is an endangered species or threatened species and should be included on the Federal Lists of Endangered and Threatened Wildlife and Plants (listed). The Act defines an endangered species as any species that is “in danger of extinction throughout all or a significant portion of its range” and a threatened species as any species “that is likely to become endangered throughout all or a significant portion of its range within the foreseeable future.” On July 1, 2014, we published a final policy interpreting

the phrase “significant portion of its range” (SPR) (79 FR 37578). In our policy, we interpret the phrase “significant portion of its range” in the Act’s definitions of “endangered species” and “threatened species” to provide an independent basis for listing a species in its entirety; thus there are two situations (or factual bases) under which a species would qualify for listing: A species may be in danger of extinction or likely to become so in the foreseeable future throughout all of its range; or a species may be in danger of extinction or likely to become so throughout a significant portion of its range. If a species is in danger of extinction throughout an SPR, the species is an “endangered species.” The same analysis applies to “threatened species.”

The SPR policy is applied to all status determinations, including analyses for the purposes of making listing, delisting, and reclassification determinations. Under section 4(a)(1) of the Act, we determine whether a species is an endangered species or threatened species because of any one or a combination of the following: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. These five factors apply whether we are analyzing the species’ status throughout all of its range or throughout a significant portion of its range.

#### **Determination of Status Throughout all of its Range**

As required by the Act, we carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to *E. f. var. kuenzleri*. Based on the analysis in the SSA Report, and information summarized above, we have determined that *E. f. var. kuenzleri*’s current viability is higher than was known at the time of listing, and we find that *E. f. var. kuenzleri* is no longer in danger of extinction throughout all of its range. However,

threats from wildfire, livestock grazing, effects of climate change (Factor A), illicit collection (Factor B), and small population size and density (Factor E) continue, despite the existing regulatory mechanisms (Factor D) and conservation efforts. Therefore, we find that *E. f. var. kuenzleri* is likely to become endangered within the foreseeable future throughout all of its range.

### **Determination of Status Throughout a Significant Portion of its Range**

Because we found that *E. f. var. kuenzleri* is likely to become in danger of extinction in the foreseeable future throughout all of its range, per the Service's Final Policy on Interpretation of the Phrase "Significant Portion of Its Range" in the Endangered Species Act's Definitions of "Endangered Species" and "Threatened Species" (79 FR 37578, July 1, 2014) (SPR Policy), no portion of the species' range can be "significant" for the purposes of the definitions of endangered and threatened species. Therefore, we do not need to conduct an analysis of whether there is any significant portion of its range because the species is likely to become in danger of extinction in the foreseeable future.

### **Conclusion**

In conclusion, the previously recognized impacts to *E. f. var. kuenzleri* from the present or threatened destruction, modification, or curtailment of its habitat or range (specifically, residential development and road maintenance) (Factor A); overutilization for commercial, recreational, scientific, or educational purposes (Factor B); disease or predation (Factor C); and other natural or manmade factors affecting its continued existence (specifically, reproductive isolation) (Factor E) do not, either individually or in combination, currently place the species in danger of extinction. However, due to continued threats from wildfire, livestock grazing, effects of climate change (Factor A), illicit collection (Factor B), and small population size and density (Factor E), despite the existing regulatory mechanisms (Factor D) and conservation efforts, we

find that *E. f. var. kuenzleri* is likely to become endangered within the foreseeable future throughout all of its range. Therefore, on the basis of the best available scientific and commercial information, we are reclassifying *E. f. var. kuenzleri* as a threatened species in accordance with section 4(a)(1) of the Act.

### **Available Conservation Measures**

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. The Act encourages cooperation with the States and requires that recovery actions be carried out for all listed species. The protection required by Federal agencies and the prohibitions against certain activities are discussed, in part, below.

The primary purpose of the Act is the conservation of endangered and threatened species and the ecosystems upon which they depend. The ultimate goal of such conservation efforts is the recovery of these listed species, so that they no longer need the protective measures of the Act. Subsection 4(f) of the Act requires the Service to develop and implement recovery plans for the conservation of endangered and threatened species. The recovery planning process involves the identification of actions that are necessary to halt or reverse the species' decline by addressing the threats to its survival and recovery. The goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems.

Recovery planning includes the development of a recovery outline shortly after a species is listed and preparation of a draft and final recovery plan. The recovery outline guides the immediate implementation of urgent recovery actions and describes the process to be used to develop a recovery plan. Revisions of the plan may be done to address continuing or new threats



to the species, as new substantive information becomes available. The recovery plan identifies site-specific management actions that set a trigger for review of the five factors that control whether a species remains endangered or may be downlisted or delisted, and methods for monitoring recovery progress. Recovery plans also establish a framework for agencies to coordinate their recovery efforts and provide estimates of the cost of implementing recovery tasks. Recovery teams (composed of species experts, Federal and State agencies, nongovernmental organizations, and stakeholders) are often established to develop recovery plans. As we revise the recovery plan to include delisting criteria, the recovery outline, draft revised recovery plan, and the final recovery plan will be made available on our Web site (<http://www.fws.gov/endangered>), or from our New Mexico Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Implementation of recovery actions generally requires the participation of a broad range of partners, including other Federal agencies, States, Tribes, nongovernmental organizations, businesses, and private landowners. Examples of recovery actions include habitat restoration (e.g., restoration of native vegetation), research, captive propagation and re-introduction, and outreach and education. The recovery of many listed species cannot be accomplished solely on Federal lands because their range may occur primarily or solely on non-Federal lands. To achieve recovery of these species requires cooperative conservation efforts on private, State, and Tribal lands.

Funding for recovery actions will be available from a variety of sources, including Federal budgets, State programs, and cost share grants for non-Federal landowners, the academic community, and nongovernmental organizations. Information on our grant programs that are available to aid species recovery can be found at: <http://www.fws.gov/grants>. Please let us know

if you are interested in participating in recovery efforts for *E. f. var. kuenzleri*. Additionally, we invite you to submit any new information on this species whenever it becomes available and any information you may have for recovery planning purposes (see **FOR FURTHER INFORMATION CONTACT**).

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as an endangered or threatened species and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the Service.

Federal agency actions within the species' habitat that may require conference or consultation or both as described in the preceding paragraph include issuance of Federal permits. With respect to threatened plants, 50 CFR 17.71 provides that all of the provisions in 50 CFR 17.61 shall apply to threatened plants. These provisions make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale in interstate or foreign commerce, or to remove and reduce to possession any such plant species from areas under Federal jurisdiction. In addition, the Act prohibits malicious damage or destruction of any such

species on any area under Federal jurisdiction, and the removal, cutting, digging up, or damaging or destroying of any such species on any other area in knowing violation of any State law or regulation, or in the course of any violation of a State criminal trespass law. However, there is the following exception for threatened plants. Seeds of cultivated specimens of species treated as threatened shall be exempt from all the provisions of 50 CFR 17.61, provided that a statement that the seeds are of “cultivated origin” accompanies the seeds or their container during the course of any activity otherwise subject to these regulations. Exceptions to these prohibitions are outlined in 50 CFR 17.72.

We may issue permits to carry out otherwise prohibited activities involving threatened plants under certain circumstances. Regulations governing permits are codified at 50 CFR 17.72. With regard to threatened plants, a permit issued under this section must be for one of the following: Scientific purposes, the enhancement of the propagation or survival of threatened species, economic hardship, botanical or horticultural exhibition, educational purposes, or other activities consistent with the purposes and policy of the Act.

Under section 4(d) of the Act, the Secretary has discretion to issue protective regulations to provide for the conservation of threatened species. Our implementing regulations (50 CFR 17.71) for threatened plants generally incorporate the prohibitions of section 9 of the Act for endangered plants, except when a rule promulgated pursuant to section 4(d) of the Act has been issued with respect to a particular threatened species. In such a case, the general prohibitions in 50 CFR 17.61 would not apply to that species, and instead, the 4(d) rule would define the specific prohibitions and exceptions that would apply for that particular threatened species. With respect to a threatened plant, the Secretary of the Interior also has the discretion to prohibit by regulation any act prohibited by section 9(a)(2) of the Act. Exercising this discretion, which has

been delegated to the Service by the Secretary, the Service has developed general prohibitions that are appropriate for most threatened species at 50 CFR 17.71 and exceptions to those prohibitions at 50 CFR 17.72. We have determined to not promulgate a rule under section 4(d) of the Act for *E. f. var. kuenzleri*, and as a result, all of the Act's section 9(a)(2) general prohibitions, including the "take" prohibitions, will continue to apply to *E. f. var. kuenzleri* when this rule goes into effect.

It is our policy, as published in the *Federal Register* on July 1, 1994 (59 FR 34272), to identify to the maximum extent practicable at the time a species is listed, those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of a listing on proposed and ongoing activities within the range of listed species. Based on the best available information, the following actions are unlikely to result in a violation of section 9, if these activities are carried out in accordance with existing regulations and permit requirements this list is not comprehensive:

- (1) Normal agricultural and silvicultural practices, including herbicide and pesticide use, which are carried out in accordance with any existing regulations, permit and label requirements, and best management practices; and
- (2) Normal residential landscape activities.

Questions regarding whether specific activities would constitute a violation of section 9 of the Act should be directed to the New Mexico Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

#### **Effects of This Rule**

This rule revises 50 CFR 17.12(h) to reclassify *E. f. var. kuenzleri* from endangered to threatened on the List of Endangered and Threatened Plants. On the effective date of this rule (see **DATES**, above), the prohibitions and conservation measures provided by the Act, particularly through sections 7 and 9, continue to apply to *E. f. var. kuenzleri*. Federal agencies are required to consult with the Service under section 7 of the Act in the event that activities they authorize, fund, or carry out may affect *E. f. var. kuenzleri*.

As applicable, recovery actions directed at *E. f. var. kuenzleri* will continue to be implemented as outlined in the recovery plan for this taxon (Service 1985, entire). One of the primary actions will be to develop revised recovery plan with delisting criteria for the cactus based on the SSA Report (Service 2017, p. 44).

### **Required Determinations**

#### *National Environmental Policy Act*

We determined we do not need to prepare an environmental assessment or an environmental impact statement, as defined under the authority of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244).

### **References Cited**

A complete list of all references cited in this rule is available on the Internet at <http://www.regulations.gov> under Docket No. FWS–R2–ES–2016–0137, or upon request from the Field Supervisor, New Mexico Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

### **Authors**

The primary author of this rule is the New Mexico Ecological Services Field Office Southwest Regional Office in Albuquerque, New Mexico, in coordination with the Southwest Regional Office in Albuquerque, New Mexico (see **FOR FURTHER INFORMATION CONTACT**).

#### **List of Subjects in 50 CFR Part 17**

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

#### **Regulation Promulgation**

Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

#### **PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS**

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 1531–1544; 4201–4245, unless otherwise noted.

2. Amend § 17.12(h) by revising the entry for “*Echinocereus fendleri* var. *kuenzleri*” under FLOWERING PLANTS in the List of Endangered and Threatened Plants to read as follows:

#### **§ 17.12 Endangered and threatened plants.**

\* \* \* \* \*

(h) \* \* \*

Scientific name	Common name	Where listed	Status	Listing citations and applicable rules
FLOWERING PLANTS				
* * * * *				
<i>Echinocereus fendleri</i> var. <i>kuenzleri</i>	Kuenzler hedgehog cactus	Wherever found	T	44 FR 61924, 10/26/1979; 83 FR [Insert <i>Federal Register</i> page where the document begins], [Insert date of publication in the <i>Federal Register</i> ].
* * * * *				

Dated: May 1, 2018.

James W. Kurth,  
Deputy Director,  
U.S. Fish and Wildlife Service,  
Exercising the Authority of the Director  
U.S. Fish and Wildlife Service.

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